

# Aborted Command Errors During Online Updates of SFA OS



**ALERT!** In SFA OS declustered RAID (DCR) versions 11.8.1 and 11.8.2, online updates to SFA OS may trigger “aborted command” errors that cause a connected host to place a VD (LUN) in read-only mode.

## Issue Summary

In revisions B4 and earlier of the *SFA OS User Guide*, the instructions for performing an online update of SFA OS or related firmware (such as BIOS, BMC, CPLD, or ESM CPLD firmware) say that the secondary controller should be upgraded first. However, doing so exposes the controller to a known issue that may cause the connected host to place one or more VDs (LUNs) in read-only mode. This occurs because the update process requires a shutdown and restart of the controller in order to load the new version of SFA OS (or related firmware).

During controller shutdown on SFA OS storage platforms, there is a transition through a quiesce state related to controller mirroring. During this transition, SFA OS responds with an “aborted command” error code to any I/O commands issued to the storage by an attached or embedded host. Depending on the duration of the quiesce state, enough “aborted command” status codes may be returned to cause the host to place a virtual disk (VD) or file system LUN in read-only mode.

Transition through the quiesce state occurs *only on shutdown of the secondary controller*. If the primary controller is shut down but the secondary controller is not, there is no quiesce state transition, so no VDs or LUNs should be made read-only. The primary controller may be shut down separately from the secondary controller at any time.

## Affected Systems

This issue affects SFA OS declustered RAID (DCR) versions 11.8.1 and 11.8.2 running on SFA platforms with embedded application processing support (E models) or on block storage platforms connected to EXAScaler, GRIDScaler, or Linux hosts.

Legacy RAID versions of SFA OS (3.x and earlier) are not affected.

## Resolution

The issue will be resolved in SFA OS 11.8.3, which will not send “aborted command” status codes to the host during transition through the quiesce state.

DDN expects to release SFA OS 11.8.3 by the end of 2020.

## Workaround

Online updates to SFA OS or related firmware should be performed on the *primary controller first*.

When the primary controller is restarted to load the new firmware, the former secondary controller is made primary as the former primary controller fails over. The firmware update may then be performed on the new primary controller without risk of encountering the “aborted command” issue.

## Determining Which Controller Is Primary

To determine which controller is primary and which is secondary in the couplet, use the `show controller` command. You will see command output similar to the following:

```
gold RAID[0]$ show controller
*****
*      Controller(s)      *
*****

-----
Idx|Name|Mastership|Locality|  Up Time  |          |Encl|          |Inter-Ctrlr Comm |Firmware
|Version|  Type |          | D: H: M: S|RP|          |Idx |          |State|ServicesUp|Release
-----
 0 A  PRIMARY  LOCAL  0035:20:32:00  2 0001ff0b0a0c0000  0 00000001ff0b0a0c Up  DG+Msg+MAD 11.8.2
 1 B  SECONDARY REMOTE 0035:20:30:56  2 0001ff0b0b6c0000  7 00000001ff0b0a0c Up  DG+Msg+MAD 11.8.2
-----

Total Controllers: 2
```

The controller labeled LOCAL in the **Locality** column (yellow) is the controller you are logged on to. You can determine whether your local controller is primary or secondary by reading the entry to the left of LOCAL in the **Mastership Type** column (green).

You can locate either controller physically with one of the following commands:

```
locate controller local
locate controller remote
```

On SFA14K and SFA18K platforms, this command illuminates a blue LED on the front panel of the controller. Refer to the product documentation for command behavior on other platforms.

## Contacting DDN Technical Support

Please contact DDN Technical Support at any time if you have questions or need assistance. Support can be reached by phone, by email, or on the web as listed below.

### Web

DDN Community Support Portal <https://community.ddn.com/login>  
Portal Assistance [webportal.support@ddn.com](mailto:webportal.support@ddn.com)

### Telephone

DDN Support Worldwide Directory <https://www.ddn.com/support/global-services-overview/>

### Email

Support Email [support@ddn.com](mailto:support@ddn.com)

**Bulletins & Notices**

*Support Bulletins*

*End-of-Life Notices*

*Release Notes*

*Subscription Requests*

<http://www.ddn.com/support/technical-support-bulletins>

<http://www.ddn.com/support/end-of-life-notices>

<https://community.ddn.com/login>

[support-tsb@ddn.com](mailto:support-tsb@ddn.com)